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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,880

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Takashi Takeuchi

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38327

7590

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REED SMITH LLP

3110 FAIRVIEW PARK DRIVE, SUITE 1400

FALLS CHURCH, VA 22042

EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT

PAPER NUMBER

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/601,880

Applicant(s)

TAKEUCHI ET AL.

Examiner

Andrew C. Lee

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

2. Claims 1, 2 are objected to because of the following informalities:

Regarding claim 1, line 4, the acronym for Passive Double Star is (PDS) instead of PON, see page 1, line 23 of the specification. PON stands for Passive Optical Network, see page 1, line 24 of the specification.

Regarding claim 1, line 14, the acronym "RADIUS" should be spelled out at least once in full text. For example Remote Authentication Dial In User Service (RADIUS).

Regarding claim 2, lines 3 – 4, the acronym for Passive Double Star is (PDS) instead of PON, see page 1, line 23 of the specification. PON stands for Passive Optical Network, see page 1, line 24 of the specification.

Regarding claim 2, line 15, the acronym "RADIUS" should be spelled out at least once in full text. For example Remote Authentication Dial In User Service (RADIUS).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2616

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 3 is rejected under 2164.08(a) Single Means Claim. A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki et al. (US 7020162 B2) in view of Allen et al. (US 20020162029 A1).

Regarding claims 1, 2, Iwasaki et al. disclose the limitation of a packet communicating system ("duplex optical distribution system" correlates to a packet

communicating system; Fig. 4, column 6, lines 14 – 29) comprising: an optical line termination (hereinafter referred to as OLT) (Fig. 4, element 100 OLT correlates to an optical line termination; column 6, lines 17 – 18) for subsidiarily connecting optical network units (ONU) (Fig. 4, element 101 ONU correlates to connecting optical network units (ONU); column 6, lines 17 – 18 ) by the passive double star type (PON) (Fig. 4, elements 114 ,passive double star interface (PDS-IF) correlates to the passive double star type; column 7, lines 4 – 6), said OLT having a function for terminating the physical layer of the PON (“system signal termination” correlates to OLT having a function for terminating the physical layer of the PON; column 6, lines 22 – 25) and controlling bandwidths in physical lines between the OLT and the ONU (“dynamic bandwidth assignment control” correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40); and Iwasaki et al. do not teach

a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the OLT, wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a RADIUS server managing information of the users when authorizing the users.

Allen et al. disclose a broadband access server (BAS) connected to broadband backbone network (Fig. 2, element 206 B-RAS correlates to broadband access server (BAS); page 2, paragraph [0015]), said BAS having a function for authorizing users communicating with the Internet (“subscriber provides the login ID and password assigned by their service providers which is transmitted to the B-RAS” correlates to BAS having a

function for authorizing users communicating with the Internet; Fig. 4, page 3, paragraphs [0038], [0040]), wherein said BAS having a function for controlling the system through a special physical line provided in the BAS for controlling, using information of the users obtained from a RADIUS server managing information of the users when authorizing the users (page 3, paragraphs [0040], [0043]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include a broadband access server (BAS) connected to said OLT, said BAS having a function for authorizing users communicating with the Internet, via the ONU and the OLT, wherein said BAS having a function for controlling said OLT system through a special physical line to the OLT provided in the BAS for controlling, using information of the users obtained from a RADIUS server managing information of the users when authorizing the users as taught by Allen et al. in order to provide a network architecture for authorizing subscriber connections to networked service providers (as suggested by Allen et al., see page 1, paragraph [0001])

Regarding claim 3, Iwasaki et al. disclose the limitation of a packet communicating system comprising an optical access network based on the passive double star system and PON ("duplex optical distribution system, PDS-IF" correlates to a packet communicating system comprising an optical access network based on the passive double star system and PON; Fig. 4, column 6, lines 14 – 29).

Iwasaki et al. do disclose a broadband access server (BAS) having a function for authorizing the users in the system, wherein said BAS having a line interface provided with

a function for terminating the physical layer of the network and a function for controlling bandwidths, and controlling the line interface through a system control bus within the BAS, using user information obtained from the RADIUS server during user authorization

Allen et al. disclose a broadband access server (BAS) having a function for authorizing the users in the system (Fig. 2, element 206 B-RAS correlates to broadband access server (BAS); page 2, paragraph [0015]; "subscriber provides the login ID and password assigned by their service providers which is transmitted to the B-RAS" correlates to BAS having a function for authorizing users communicating with the Internet; Fig. 4, page 3, paragraphs [0038], [0040]), wherein said BAS having a line interface provided with a function for terminating the physical layer of the network ("management interface and network interface" correlates to having a line interface provided with a function for terminating the physical layer of the network; Fig. 2, page 2, paragraph [0016]) and a function for controlling bandwidths, and controlling the line interface through a system control bus within the BAS (Fig. 2, the bus connecting the Management interface and the network interface/ports; page 3, paragraph [0034]), using user information obtained from the RADIUS server during user authorization (page 3, paragraphs [0040], [0043]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include a broadband access server (BAS) having a function for authorizing the users in an optical access network based on the passive double star system, wherein said BAS having a line interface provided with a function for terminating the physical layer of the PON and a function for controlling bandwidths, and controlling the line interface through a system control bus within the BAS, using user

information obtained from the RADIUS server during user authorization as taught by Allen et al. in order to provide a network architecture for authorizing subscriber connections to networked service providers (as suggested by Allen et al., see page 1, paragraph [0001])

Regarding claims 4, 5, 6, Iwasaki et al. disclose the limitation of a packet communicating system ("duplex optical distribution system, PDS-IF" correlates to a packet communicating system; Fig. 4, column 6, lines 14 – 29). Iwasaki et al. disclose the limitation of the packet communicating system according to claimed wherein the BAS is provided with a special physical line to OLT for system control, and having a function for sending and receiving packets for controlling user bandwidths, and setting bandwidths for the users to send and receive packets, through said special physical line.

Allen et al. disclose the limitation of the packet communicating system according to claimed wherein the BAS is provided with a special physical line to terminal for system control (Fig.2, connections between the B-RAS and Access Multiplexer correlates to provided with a special physical line to terminal for system control; page 3, paragraph [0034]), and having a function for sending and receiving packets for controlling user bandwidths (Page 3, paragraph [0038]), and setting bandwidths for the users to send and receive packets, through said special physical line (page 1, paragraph [0005]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include the packet communicating system according to claimed wherein the BAS is provided with a special physical line to OLT for system control, and having a function for sending and receiving packets for controlling user bandwidths, and setting bandwidths for the users to send and receive packets, through said



special physical line as taught by Allen et al. in order to provide a network architecture for authorizing subscriber connections to networked service providers (as suggested by Allen et al., see page 1, paragraph [0001]).

Regarding claims 7, 9, 11, Iwasaki et al. disclose the limitation of the packet communicating system ("duplex optical distribution system" correlates to a packet communicating system; Fig. 4, column 6, lines 14 – 29) according to claimed wherein said packet communicating system having a function for controlling bandwidths for the users to send and receive packets, allocated between the ONUs and the OLT ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40), according to the number of users accommodated under the ONUs or bandwidths allocated to the individual users ("a minimum transmission bandwidth is assigned to each ONU independently" correlated to the number of users accommodated under the ONUs or bandwidths allocated to the individual users; column 8, lines 58 - 60).

Regarding claims 8, 10, 12, Iwasaki et al. disclose the limitation of the packet communicating system according to claimed wherein said packet communicating system having a function for controlling bandwidths for the users to receive packets between the OLT and the ONUs for each of users accommodated under the ONU s ("dynamic bandwidth assignment control" correlates to controlling bandwidths in physical lines between the OLT and the ONU; Fig. 1, column 8, lines 29 – 40, lines 58 – 60).

Regarding claim 13, Iwasaki et al. disclose the limitation of a packet communicating system comprising: a plurality of optical network units (Fig. 12, elements 2-n correlates to a plurality of optical network units; column 1, lines 60 – 67); a star coupler connected with the plural optical network units (Fig. 12, element 3 optical splitter correlates to a star coupler connected; column 1, lines 10 – 11, column 2, lines 6 – 13); and a packet communicating apparatus connected with the star coupler (Fig. 12, “element 1, optical line termination and element 3 optical splitter” correlates to a packet communicating apparatus connected with the star coupler; column 2, lines 6 – 13), wherein the packet communicating apparatus multiplexes sending data to the plural optical network units and sends the multiplexed sending data to the star coupler (Fig. 12, column 1, lines 27 – 36), the star coupler broadcasts the multiplexed sending data to the optical network units (column 1, lines 27 – 29), and each of the optical network units receives data directed to that optical network unit (column 1, lines 27 – 29, lines 64 – 67), wherein the packet communicating apparatus comprises: an optical line termination having a function for controlling bandwidths between the optical line termination and the optical network units (“dynamic bandwidth assignment control” correlates to an optical line termination having a function for controlling bandwidths between the optical line termination and the optical network units; column 8, lines 29 – 40); and

Iwasaki et al. do not disclose a server, connected to the optical line termination, that has a function for authorizing users who communicate with a network via the optical network units and the optical line termination, and wherein the server uses user information

used during the user authorization and the optical line termination sets bandwidths on a user basis.

Allen et al. disclose a server (Fig. 2, element 206 B-RAS correlates to a server; page 2, paragraph [0015]), connected to the line termination (Fig. 2, element 204 access multiplexer correlates to line termination; page 2, paragraph [0016]), that has a function for authorizing users who communicate with a network via the network units and the line termination (page 2, paragraph [0021]), and wherein the server uses user information used during the user authorization and the line termination sets bandwidths on a user basis (page 3, paragraphs [0040], [0043]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwasaki et al. to include a server, connected to the optical line termination, that has a function for authorizing users who communicate with a network via the optical network units and the optical line termination, and wherein the server uses user information used during the user authorization and the optical line termination sets bandwidths on a user basis as taught by Allen et al. in order to provide a network architecture for authorizing subscriber connections to networked service providers (as suggested by Allen et al., see page 1, paragraph [0001]).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Saikusa (US 6931013 B2) disclose a PON transmission system and a dynamic band assignment system to be employed in the same which permits high speed band variation, to effectively use up band in PDS period, and to adapt to variation of traffic type.
- Yokomoto et al. (US 20020067529 A1) disclose passive optical network transmission system, ATM-passive optical network transmission system, optical network unit of ATM-passive optical network transmission system, and optical line terminator of ATM-passive optical network transmission system.
- Nakaishi (US 20020021472A1) discloses ATM-PON dual system, optical line terminal, optical network unit and ATM-PON dual method
- Monzawa et al. (US 20050058139 A1) disclose an optical network unit and an optical line terminal which efficiently control the data receiving and dechurning processes in a passive optical network.
- Allen et al. (US 20020162029 A1) disclose a subscriber authentication service is provided by a network access system. The system includes a remote access server (RAS) having ports for communicating with subscribers, a management interface for associating line identifiers with the subscriber ports, and a database for storing the line identifiers.
- Osafune et al. (US 20030065787 A1) disclose a method to provide data communication service, which enables each service provider to provide each user with both contents service and Internet connection service.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Seema S. Rao*  
SEEMA S. RAO 3/29/07  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

/Andrew C. Lee/::<3/28/2007>